

System for Loading Executable Code into Volatile Memory in a Downhole Tool

Abstract

A system for loading an executable code into volatile memory in a downhole tool string component comprises a surface control unit comprising executable code. An integrated downhole network comprises data transmission elements in communication with the surface control unit and the volatile memory. The executable code, stored in the surface control unit, is not permanently stored in the downhole tool string component. In a preferred embodiment of the present invention, the downhole tool string component comprises boot memory. In another embodiment, the executable code is an operating system executable code. Preferably, the volatile memory comprises random access memory (RAM). A method for loading executable code to volatile memory in a downhole tool string component comprises sending the code from the surface control unit to a processor in the downhole tool string component over the network. A central processing unit writes the executable code in the volatile memory.